REMARKS/ARGUMENTS:

By the present amendment, claims 1 – 12, 14 – 17, 19, 20, 22 and 23 are amended; claims 24 and 25 are newly added; and claim 7 is canceled. Claims 1 – 17 and 19 - 25 are pending in the application, with claim 1 being independent.

Applicant has carefully considered the contents of the Office Action and respectfully requests reconsideration and reexamination of the subject application in view of the explanations noted below.

Objection to the Specification

A substitute specification is attached hereto that corrects errors in both the specification and the abstract, pursuant to 37 C.F.R. §§ 1.125(b) and (c). As noted above, both marked-up and clean copies of the substitute specification are attached, and no new matter has been added. Entry of the substitute specification and withdrawal of the objection to the specification is respectfully requested.

Rejections under 35 U.S.C. § 112(second paragraph)

Claims 1 – 23 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite, particularly for the claims written in laundry list form and including abbreviation.

The above amendments to the claims obviate the rejection of the claims under 35 U.S.C. § 112, second paragraph.

Rejections under 35 U.S.C. § 103(a)

Claims 1 – 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of U.S. Patent No. 5,932,119 to Kaplan et al. (the Kaplan '119 patent) and in further view of U.S. Patent No. 5,510,891 to Frangie (the Frangie '891 patent). Applicant respectfully traverses this rejection, since AAPA in view of the Kaplan '119 and Frangie '891 patents clearly do not disclose, teach or render obvious the subject matter of independent claim 1.

AAPA discloses conventional bruting machines in which a rough diamond to be girdled is mounted in a chuck of a lathe and *another diamond* is used as the cutting tool to

girdle the rough diamond. Applicant's specification does not disclose diamond bruting machines that use lasers to cut a diamond.

The Kaplan '119 patent is cited for disclosing a laser processing machine having a Q-switched laser, CNC control, a cooling system and a diamond work holder.

The Frangie '891 patent is cited for disclosing a diamond holder using magnetic means and having upper and lower members.

The claimed invention provides the succession of processes for rough diamond preparation, such as marking, cleaving, sawing, girdling and also final facet forming and brilliance, with a laser bruting machine having three main sections: a diamond holder (8), a setup device (3), and a processing device (4). The diamond holder includes a stitching die with a magnetic die and a rough diamond adapted to be magnetically mounted on the stitch die. The setup device for setting up the diamond includes a computer numerical control (CNC) interface for controlling a motorized X-axis positioner, a motorized rotatable platform and a motorized up and down positioner. Drive cards are connected to the motorized X-axis positioner, the motorized rotatable platform and the motorized up and down positioner. A control card, which is disposed in a computer having a monitor connected thereto, controls movement provided by the drive cards. Three stepper motors are connected to a power supply and supply power to the drive cards. A video system is also provided in the setup device.

The processing device for cutting and polishing of the diamond on the diamond holder includes a CNC interface for controlling a motorized Y-axis positioner, a motorized rotatable platform, and a motorized X-axis positioner. A Y drive card, an X drive card and an R drive card drive movement of the motorized Y-axis positioner, the motorized rotatable platform, and the motorized X-axis positioner. A drive card power supply supplies power to the drive cards, which drive three stepper motors to provide the movement. A control card, which is disposed in a computer having a monitor connected thereto, controls movement provided by the drive cards.

The Frangie '891 patent has a measuring device 10 that is used to measure selected characteristics of an object, such as dimensions thereof, and is particularly adapted to enable a user to measure table facets T of a diamond D, as well as measuring various areas of gems in general without creating a dexterity problem. The measuring device has a lower base 12, a

first annular magnetic element 24 disposed in the lower base, and a holder member 16 surrounded by the first magnetic element and being mounted within the lower base. The holder member 16 is adapted to receive and hold an object, such as a gem. A slit 42 in the holder member, which forms a pocket having sides 46, is adapted to receive the object to be measured. However, the diamond is not adjustable once inserted in the slit 42. Independent claim 1 recites that the rough diamond and stitching die are centered on the magnetic die. Such adjustments are not possible with the measuring device of the Frangie '891 patent. Moreover, such adjustments are also not disclosed or suggested in AAPA or in the Kaplan '119 patent. Therefore, AAPA in view of the Kaplan '119 and Frangie '891 patents does not disclose or render obvious the claimed features of Applicant's invention as recited in independent claim 1.

Furthermore, the claimed invention is a useful technique because the laser bruting machine may check the process at all times without stopping the machine and also may be operated by a single person. Because the laser bruting and girdle polishing process is a non-contact process, it provides more speed and significantly reduces weight loss. The laser bruting process includes a sliding beam bender, a lower beam bender, and a lower focusing device. The girdle polishing process includes an upper beam bender, an upper focusing device, and a sliding beam bender. The lower beam bender and the upper beam bender are placed at approximately 45 degrees with respect to the incoming laser beam, and each of the beam benders bends the laser beam at approximately 90 degrees. The Kaplan '110 patent includes a pulse laser energy source and a workpiece mounting system that allows optical access to a mounted workpiece. The optical system means for directing focused laser energy onto a desired portion of the workpiece includes a beam expander, a dichoric mirror and a focusing lens. Thus, the Kaplan '110 patent does not disclose an optical system having a sliding beam bender that may either bend the laser beam or be bypassed by the laser beam depending on whether the bruting process or girdle polishing process is in operation. Therefore, AAPA in view of the Kaplan '119 and Frangie '891 patents does not disclose or render obvious the claimed features of Applicant's invention as recited in dependent claim 17.

The technical problem for cutting a diamond with perfection that is solved by Applicant's claimed invention includes a computer as an important element in cutting of the

diamond, which is facilitated by standard software installed on the computer to suggest optimal cuts to provide the diamond with an accurately rounded shape. Such diamond cutting suggestions take the dimensions and shape of the diamond into account, and also the rough diamond stone to be centered and bruted is lit up by illuminating sources. The illuminating sources include a plurality of light emitting diodes (LED's) so the eye gets the impression that it is always the same side of the diamond being lit, while watching the process on a closed circuit television (CCTV) through a video system. The video system includes charge-coupled device (CCD) cameras. A radio requency (RF)-Q switch driver is connected to computer. The Q-switch, the heat exchanger and the stabilizer are connected to a power supply. A test point (T.P.) switch, a laser lamp on and off toggle switch, a current setting unit, a push button on and off switch of a current setting unit, and a current variable knob are connected to the power supply. The computer program for the bruting process system and polishing system are stored and run on the computer, which is connected to a local area network (LAN). The Kaplan '119 patent includes a laser energy system that has a semiconductor excited Q-switched solid state laser energy source, an optical system for focusing laser energy from the laser energy source onto a cut gemstone, a displaceable stage for moving the gemstone mounting system with respect to the optical system, a control input, an imaging system for viewing the gemstone from a plurality of vantage points and a predetermined program and a storage system coupled to the imaging system for electronically storing information relating to images of a plurality of workpieces. However, the Kaplan '119 patent does not disclose or suggest a diamond holder movable between a setup device and a processing device as recited in independent claim 1. Therefore, AAPA in view of the Kaplan '119 and Frangie '891 patents does not disclose or render obvious the claimed features of Applicant's invention as recited in dependent claim 1.

Because the AAPA, the Kaplan '119 patent and the Frangie '891 patent do not disclose or render obvious independent claim 1, their respective dependent claims 2 – 17 and 19 - 25 are also allowable for the above reasons. Moreover, these dependent claims recite additional features further distinguishing them over the cited patents, such as computer numerical control interface of the setup device of claim 3; the computer numerical control interface of the processing device of claim 8; the limit switches of claims 13 and 24; and the drive card power supply of claim 25. Therefore, dependent claims 2 – 17 and 19 - 25 are not

anticipated or rendered obvious by the cited patents, particularly within the overall claimed combination.

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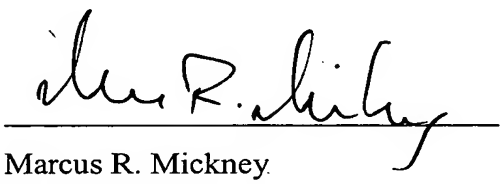
In view of the foregoing amendments and comments, Applicant respectfully submits that claims 1 – 17 and 19 - 25 are in condition for allowance. Prompt and favorable action is solicited.

Respectfully Submitted,



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